IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Original claims 1-19 (canceled)
Substitute claims 1-20 (canceled)

21. (new) A large manipulator with an articulated mast (22), which is linked to a mast base (21) rotatable about a vertical axis (13) on a chassis (11), the articulated mast having one end connected to the mast base with the other end being a free end (27) ending in a mast tip (33), the large manipulator comprising at least

three mast arms (23 to 27) limitedly pivotable about respectively parallel horizontal articulation axis (28 to 32) relative to the mast base (21) or an adjacent mast arm (23 to 27) via a respective drive unit (34 to 38),

a control unit (70) for actuating the drive units (34 to 38) for mast movement, the control unit including a coordinate transformer (74, 76) that responds to guiding parameters (r, h) for the mast tip (33) or for an end hose (43) located thereon, and to measured angular values that are determined by means of angle sensors (44 to 48) on the mast arms (23 to 27) for translation into articulation axis referenced movement signals ($\Delta\alpha_v$) for the drive units (34 to 38) in accordance with predefined path/slew characteristics,

wherein geodetic angle sensors (44 to 48) which determine geographically referenced angular values (ε_v) of the individual mast arms (23 to 27) are disposed in a rigid manner on the mast arms (23 to 27), and

wherein the coordinate transformer is acted upon by the measured angular values (ε_v) of the geodetic angle sensors (44 to 48).

22. (new) The large manipulator according to Claim 21, wherein the guiding parameters (*r*, *h*) for the mast tip (33) or for an end hose (43) are provided in a chassis-referenced coordinate system.

23. (new) The large manipulator according to Claim 21, wherein in addition a geodetic angle sensor (49) is provided on the mast base (21) for measurement of a geographically referenced angle value associated with the mast base (21).

24. (new) The large manipulator according to Claim 21, wherein at least one geodetic angle sensor is provided on the chassis (11) for measurement of at least one geographically referenced angle value associated with the chassis.

25. (new) The large manipulator according to Claim 21, wherein the geodetic angle sensors (44 through 48) are tilt angle sensors responsive to the gravity of the earth.

26. (new) The large manipulator according to Claim 21, wherein the coordinate transformer includes a software routine (76) for conversion of geographically referenced mast arm base angle values (ε_v) into articulation angles (α_{iv}).

27. (new) The large manipulator according to Claim 21, wherein the coordinate transformer includes a software routine for translating geographically referenced mast arm base angle values (ε_v) into chassis referenced cylinder coordinates (*r*, *h*) for the mast tip or the end hose.

28. (new) The large manipulator according to Claim 21, wherein the coordinate transformer includes a software routine (74) for conversion of the guide or command value (r) into guide articulation angles (α_{sv}) in accordance with a predetermined path/slew characteristic of the articulated mast (22).

29. (new) The large manipulator according to Claims 21, wherein a software routine (78) responsive to dynamic angle measurement values (α_{iv}) for the dividing thereof into low frequency and high frequency angle measurement value components.

30. (new) The large manipulator according to Claim 28, wherein a group of articulation axes referenced control comparers (90), which are acted upon by the stationary or low

frequency component (α_{iv}^{N}) of the articulation axes based articulation angles (α_{iv}) as instantaneous values and the articulation axes based guide articulation angles (α_{iv}) as set or desired values, and which are connected on the output side with an articulation axes based command or steering value controller (84) for control or actuation of the drive units (34 through 38) of the associated articulation axes (28 through 32).

31. (new) The large manipulator according to Claim 29, wherein a group of articulation axes based or referenced error value controllers (86), which are acted upon with the articulation axes high frequency component (α_{v}^{H}) of the articulation angle and which are connected to the signal inputs (88) of the associated drive units (34 through 38) of the articulation axes (28 through 32) with formation of an error magnitude input circuit.

32. (new) The large manipulator according to Claim 31, wherein the error magnitude controllers (86) are preceded by a software routine (80) responsive to the geographically referenced angle measurement values (ε_{v}) and the high frequency summed component (αH) of the articulation angles for determining the articulation axes based high frequency component (α_{v}^{H}) of the articulation angles.

33. (new) A large manipulator comprising:

a chassis (11),

a mast base (21) on the chassis (11),

an articulated mast linked to the mast base (21) and rotatable about a vertical axis (13), the articulated mast (22) having a free end (27) ending in a mast tip (33) and comprising at least three mast arms (23 to 27) limitedly pivotable about respectively parallel horizontal articulation axis (28 to 32) relative to the mast base (21) or an adjacent mast arm (23 to 27) via a respective drive unit (34 to 38),

a control unit (70) for actuating the drive units (34 to 38) for mast movement, the control unit including a coordinate transformer (74, 76) which responds to guiding parameters (r, h) for the mast tip (33) or for an end hose located thereon and to measured angular values that are determined by means of angle sensors (44 to 48) on the mast arms (23 to 27) for translation into articulation axis referenced movement signals ($\Delta\alpha_v$) for the drive units (34 to 38) in accordance with predefined path/slew characteristics,

wherein one GPS-module is rigidly provided on each mast arm for determining the geographically referenced position measurement value of the individual mast arms, and

wherein the coordinate transformer is acted upon by the position measurement values of the GPS module.

34. (new) The large manipulator according to Claim 33, wherein the guiding parameters (*r, h*) for the mast tip (33) or for an end hose (43) are provided in a chassis-referenced coordinate system.

35. (new) The large manipulator according to Claim 33, wherein in addition a GPS module is associated with the mast base for measurement of a geographically referenced position measurement value associated with the mast base.

36. (new) The large manipulator according to Claim 33, wherein in addition at least one GPS module is provided associated with the chassis for measurement of at least one chassis associated geographically referenced position measurement value.

37. (new) The large manipulator according to Claim 33, wherein the coordinate transformer includes a software routine (74) for conversion of geographically referenced mast arm based position measurement values into articulation angles (α_{iv}).

38. (new) The large manipulator according to Claims 33, wherein that the coordinate transformer includes a software routine (74) for conversion of the guide or command value (r, h) into guide articulation angles (α_{sv}) in accordance with a

predetermined path/slew characteristic of the articulated mast (22).

39. (new) The large manipulator according to Claim 33, wherein a software routine (78) responsive to the dynamic position measurement values, for their distribution or subdivision into low frequency and high frequency position measurement components.

40. (new) The large manipulator according to Claim 37, wherein a group of articulation axes based control comparers (90), which can be acted upon with the stationary or low frequency components (α_{iv}^{N}) of the articulation angle (α_{iv}) as instantaneous values and the command angles (α_{sv}) as desired or set values and which, on the output side, are connected with respectively one articulation axes based command value controller (84) for actuating the drive units of the associated articulation axes (28 through 32).

41. (new) The large manipulator according to Claim 38, wherein a group of articulation axes associated error value controllers (86), which can be acted upon with the articulation axes based high frequency components (α_{v}^{H}) of the articulation angles and which are connected to the signal inputs (88) of the associated drive units (34 through 38) of the articulation axes (28 through 32) with formation of an error magnitude circuit input.

42. (new) The large manipulator according to Claim 41, wherein the error value controllers (86) are preceded with a software routine (80), responsive to the geographically referenced position measurement values and the high frequency component (α^H) of the articulation angle, for determining the articulation axes based high frequency component (α_v^H) of the articulation angle.